

AUG. 4. 2006 7:54PM

NO. 4407 P. 5

Application No.: 10/806559
 Docket No.: AD7001USNA

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JB 10103106 Please amend the paragraph bridging pages ²1 and ³7 as follows:

In U. S. Pat. Nos. 5,306,700 and 5,556,900, PMA compositions useful in road paving and roofing applications are disclosed. These compositions include involving a reactive polymeric asphalt additive that chemically reacts and links to the asphalt as a result of the presence of an epoxy functional group. The reactive polymer additive is an ethylene copolymer of the general formula E/X/Y/Z where E represents the ethylene derived unit and constitutes from 20 to 99.5 wt% of the copolymer. The X can be present up to 50 wt% and is derived from, for example, alkyl acrylates, alkyl methacrylates, vinyl esters, and or alkyl vinyl ethers. The Y is present in from 0.5 to 15 wt% and is to be derived from [;], for example, glycidyl acrylate, glycidyl methacrylate or glycidyl vinyl ether. The Z is optionally present up to 15 wt% and is derived from other ~~monomer monomers~~ such as carbon monoxide, sulfur dioxide, acrylonitrile and the like. Of particular note is the reactive terpolymer ethylene/n-butyl acrylate/glycidyl methacrylate (EnBAGMA), which is known (after chemical linking to the asphalt) to significantly improve both elasticity and stiffness of the resulting PMA, much like elastomeric asphalt additive.

Please replace the paragraph on page 3 from lines 10 to 30 with the following:

In U.S. Pat. Nos. 6,117,926 and 6,399,680, improved PMA compositions are taught wherein an asphalt and a stiffness-enhancing copolymer having available epoxy groups are reacted in the presence of an effective amount of an acid (e.g., H₃PO₄ and H₂SO₄) to promote chemical bonding between the asphalt and the available epoxy groups of the copolymer. The use of the acid is shown to minimize the amount of epoxy functionalized polymer additive (generally the most expensive component) required to achieve greater stiffness values over similar reaction times relative to no acid being present. The references also acknowledge that low temperature SHRP performance grades are attained by the addition of processing oils and additionally ethylene